



"The New Voice of Salmon"
1370 Auto Center Drive
Petaluma, CA 94952
(855) 251-4478

September 26, 2011

Mr. Phil Isenberg, Chairman
Delta Stewardship Council
980 9th Street Ste 1500
Sacramento, CA 95814

Dear Mr. Isenberg:

This letter will provide the comments of the Golden Gate Salmon Association on the Draft Five of the Delta Plan released on August 2, 2011.

The Golden Gate Salmon Association (GGSA) is a 501 C3 Corporation formed in December of 2010 to address the problems and needs of the Central Valley salmon populations of California. Its Board of Directors and its affiliated organizations represent a broad cross section of the salmon industry including commercial salmon fishermen and women, recreational salmon anglers, seafood processors, seafood restaurants, ocean charter operators, river guides, coastal marinas, salmon equipment manufacturers, salmon equipment wholesalers and salmon equipment retailers. Some of the affiliated and supporting organizations include PCFFA, The Golden Gate Fishermen's Association, Water4Fish, Coastside Fishing Club, Salmon Water Now, The Small Boat Commercial Salmon Fishermen's Association, Salmonaid, The Northern California Council of the Federation of Fly Fishers, The Bay Institute, NRDC and the Northern California Guides Association. These comments therefore represent a strong consensus of the California salmon industry.

This is the first time we have submitted comments on one of the Draft plans. Our comments will go to specific salmon issues and are therefore primarily directed to Chapter 5- Restore the Delta Ecosystem. We commend the Council for assembling a highly valuable background and working document. We have some general concerns and also some specific comments. Some of our statements are critical of the plan. Please

accept them as constructive criticism. We consider the role of the Delta Stewardship Council as critical to the future of the estuary and salmon recovery in the Central Valley. As you know, the Central Valley river system is the second largest salmon production watershed in the lower 48 states – second only to the Columbia River basin. The Delta is the migratory route for these salmon between their natal Sierra streams and the Golden Gate. If baby salmon cannot survive and thrive during their journey through the Delta, our fisheries collapse – as was evidenced by the 2008-2009 total closures and 2010 highly restricted fishery. It is our hope, therefore, that we can work with the Council on the changes that need to be made in the Bay-Delta estuary necessary for the legally-mandated protection, recovery and doubling of our salmon populations.

In the past decade the four Chinook (King) Salmon runs of the Central Valley have all suffered severe declines. The Fall Run (unlisted) has suffered the worst crash dropping 91% from 1.4 million adults in 2002 to 133,000 in 2010. The Late Fall run (unlisted) has dropped 50% since 2007. The Spring Run (ESA listed) has dropped 85% since 2003 and the Winter Run (ESA listed) has dropped 91% since 2006 with only 1,555 adults returning in 2010. Clearly, a salmon emergency exists. We are deeply concerned because we see very little being done to reverse these declines. We would like to see more salmon specific plans included in the Delta Plan.

Our first concern with Draft Five is its lack of specific references to salmon problems and salmon solutions, although the draft does note that, the recovery of salmon is a requirement for part of the Delta Plan. The plan indicates that salmon recovery will be an indicator of the success of ecosystem recovery, however, the current draft lacks detail on measures needed to be taken to effect that recovery. We concur with the statement on page 107 that says, “An overarching goal for ecosystem restoration in the Delta Reform Act is to restore fish and wildlife to include more viable and resilient populations of native and resident and migratory species.”

The recovery of the salmon will take a number of specific actions targeted directly to salmon water flow – quantity and timing – along with water quality and habitat conditions. We do not find these targeted actions in Draft Five. Neither do we find them in the current BDCP plan. Examples of targeted actions would be spawning gravel additions in key locations (habitat) or new flow and temperature standards at spawning and rearing locations (water quality). There are positive flow evaluations outlined in the flow discussions on page 113 but they are not specific. An effective final plan will require specific fish flow recommendations, together with necessary water quality and habitat measures.

GGSA and its advisors are currently consulting with state and federal fishery agencies, and other experts to develop a list of specific actions – a plan or “blueprint” – for the

restoration of Central Valley salmon populations. As we develop these we look forward to meeting with you, the Council and staff on essential salmon measures for inclusion in your final document.

The salmon biological opinion of 2009 required certain flows changes in the Delta and upriver to protect listed salmon. These changes were based on best available science and represent the minimum actions required to avoid extinctions. Yet they remain the targets of those who would destroy the salmon and other species in order to export more water. We urge the Council to support these minimums in the Delta Plan as a matter of policy.

The main focus of Draft Five appears to be on riparian, flood plain and tidal marsh habitat improvements in the Delta. Some Delta habitat improvements are needed for salmon but there are other changes that are far more important for salmon recovery. We recognize that a number of the habitat additions are for non salmon species but the plan suggests that loss of Delta habitat is the main thing that needs fixing. The most important salmon habitat fix within the Delta proper, based on our conversations with salmon scientists is the addition of shallow water rearing habitat. We only see limited references to those in the plan. And, habitat fixes alone will do little good unless there are sufficient flows for the fish during critical times of the year, sufficient flow to maintain estuarine function, and improvements to water quality.

In 1990 the Winter Run salmon was listed under the ESA (please refer to the attached chart – The Rise and Fall of the Central Valley Chinook Salmon Returns). At that time all of the runs were in very poor shape. Five major problems were identified in the Sacramento River and over the next decade all of them were fixed at a cost of \$1 billion. The fixes were (1) Lack of cold water from Shasta for spawning which was fixed by installing the temperature curtain. (2) Iron Mountain Mine pollution which was fixed by the Superfund. (3) inadequate screens at GCID which were fixed with new screens, (4) opening the Gates at Red Bluff to allow fish passage in both directions which is now done and (5) Upgrading of the Coleman hatchery. With the completion of these projects, all the salmon runs responded in dramatic fashion. In 2002, a modern record was achieved totaling 780,000 returning adults. In the same year another 720,000 were harvested in the ocean. Today the Delta is in much the same shape as it was in 2002. It has the same channels, the same riparian conditions and the same levies. Those conditions were present in 2002 and they are mostly still present today. Why then have the runs crashed? The answer is not in a lack of Delta riparian, flood plain and tidal marsh habitat but in other factors.

From the evidence we have seen and from our discussions with salmon scientists, GGSA finds that the deteriorating conditions occurring in the Delta since 2002 are attributable mainly to increased Delta pumping rates. This increased pumping has 1) directly affected

juvenile fish migration (e.g., entrainment at the Delta pumps, increased predation from the small fish becoming “lost” in the Delta due to changes in flow direction) and 2) significantly reduced freshwater inflow essential for estuarine function affecting food supply for juvenile salmon and exacerbating problems within a highly “invaded” system.

In 2004 the draft biological opinion prepared by NMFS (finding “jeopardy”) for the OCAP to control pumping was overturned in Washington, for political reasons, and the pumps were allowed to run at near maximum particularly in the spring when the smolts attempt to migrate through the Delta. The result was the start of the salmon disaster. These pumping conditions prevailed until 2008 when the court intervened on behalf of the ESA. The situation was worsened when the drought hit and two years of ocean conditions absent any krill. Of the Pacific salmon runs, however, Central Valley salmon stocks suffered the greatest decline, which is reasonable to hypothesize was due not simply to poor ocean survival, but very poor Delta survival. Today, the salmon are in “Code Blue”. Significant changes are needed in the system if salmon are to recover.

GGSA recommends that the Delta Plan and other policies address these root causes of the declines or the salmon will not be recovered. The Delta flows obviously need fixing, as do the reservoir releases, the upriver flows, the temperatures and the spawning and rearing zones. Delta habitat additions can provide some benefit, but have little value unless foundational changes for salmon survival are made related to flow, water quality and in-water habitat fixes. More of the habitat improvements may be needed upriver than in the Delta. The system must return to conditions where salmon can successfully spawn and migrate downstream.

NMFS studies have found that only about 20% of the smolts hatched in the upper Sacramento and its tributaries currently make it to the Delta. 80% of the smolts perish in the trip down the river and into the Delta. If this figure cannot be improved, the Delta habitat improvements or other Delta changes will do little good in restoring the runs. The right answer is a combination of fixes in the Delta and in the upper river and tributaries.

Draft Five discusses the BDCP. We share the same concerns with the BDCP plan that we are expressing with Draft Five. The BDCP conservation actions rely on the restoration of 83,000 acres of riparian, floodplain and tidal marsh habitat in the Delta. Some of these take as long as 40 years to implement. The salmon will not be recovered under this scenario, indeed, coupled with other elements of the BDCP we may very well see the extirpation of salmon from the Central Valley watershed and the loss of other native fish as well. From the scientists and legal experts we’ve talked to, the course the BDCP is currently on, will find it in conflict with CEQA, NEPA, the state and federal ESAs, and the CVPIA, and probably other state and federal statutes as well. Perhaps some in the BDCP are hoping for some changes to our national and state environmental

laws in 2013 and after, but that will not help salmon and is not, the direction, we believe, the Council intends to take. We urge the Delta Stewardship Council to help steer the BDCP to a salmon plan that will work and will pass the CEQA and NEPA requirements.

Specific Comments

Page 109 line 26. The sentence says the objective is to mimic historical landscape functions to a degree that enables native species to use them to meet their needs.

Comment – Landscape functions are on the low end of the salmon rebuilding needs.

Page 112 line 3 says “Strong scientific consensus supports the concept that water flows more closely reflecting historical flow conditions are best for native communities of aquatic organisms.”

Comment – We strongly agree with this statement and suggest it should be the overriding policy in approaching flow changes for the benefit of salmon.

Page 113 discusses the policies and steps for implementing Delta and river flow changes.

Comment – Required flow changes are going to positively impact salmon rebuilding. At the same time they may negatively impact Delta exports and plans like the BDCP. We would urge that an attempt be made to identify and implement some earlier flow changes before 2014 and 2018. Flow changes will be very important for salmon recovery and absent some early changes, we likely will be faced with additional fishing curtailments and/or additional ESA listings. Under the current flow conditions, a dry rainfall year or poor ocean conditions would compound the already dire salmon conditions. We cannot afford that risk.

Page 114 starting with line 23. The paragraph cites exploitation (for example overfishing) as a leading cause of extinctions. It goes on to suggest that habitat improvement along with a reduction in exploitation can lead to species recovery.

Comment – The salmon industry is a highly regulated industry. The Federal Government carefully manages the salmon fishery to ensure that overfishing does not occur. We object to any implication that the Central Valley salmon are or have been overfished. The root causes of the salmon declines lie in the freshwater habitat areas where conditions have deteriorated to the point that the salmon populations cannot sustain themselves. Note that the federal Magnuson-Stevens Act definition on overfishing is clumsy at best, broadly describing any depleted fish stock as “overfished” whether or not

that depletion was the result of fishing effort. We'd urge the Council to be more precise in its descriptions of the status of fish stocks.

Page 114 starting with line 45. The sentence says, "On the other hand, current habitat conditions are insufficient to sustain a number of aquatic and terrestrial species such as the fishes involved in the sudden "pelagic organism decline (POD) in the first decade of the twenty-first century as well as winter- and spring-run Chinook salmon, giant garter snake, and the Suisun thistle among others.

Comment- We completely concur with the insufficient habitat conditions. Our concern is that only the ESA listed salmon species, winter and spring-run are included in the reference. All the Central Valley salmon runs suffer from the same insufficient habitat loss and they all should be cited by the Plan. The implication here is that the Delta Stewardship Council is only concerned with recovering listed species. It is clear in the law that recovery covers all species and we believe the Council should make it clear that its actions are not only restricted to listed species. Moreover, state and federal law requires the doubling of naturally-spawning salmon populations (i.e, the state law requires salmon doubling throughout California; federal law requires the doubling of anadromous fish populations within the Central Valley)

Page 115 begins a discussion of the Ecosystem Restoration Program (ERP). On page 116 line 7 it says, "It also follows the principle of a single blueprint for ecosystem restoration and species recovery in the Delta in accordance with the principles of ecosystem-based management."

Comment – GGSA has reviewed the Ecosystem Restoration Program and we are concerned with its lack of specifics and priority recommendations. It is an excellent resource on species and habitat conditions but it provides no guidance on priorities for action. We do not feel it provides any roadmap for rebuilding the salmon runs and therefore we are concerned that the Council is placing so much emphasis on it.

Page 119 Recommendations. The Draft Five calls for prioritization and implementation of five habitat restoration areas. They are Cache Slough, Cosumnes River, Lower San Joaquin Floodplain, Suisun Marsh and the Yolo Bypass.

Comment – One gets the impression that these five projects are the most important steps to recover the ecosystem and species. We question the importance of these projects as a priority for salmon recovery. Some of them can make salmon contributions like the Yolo bypass project but there are other actions that Draft Five is missing that are more important for salmon than these actions. The preamble of this section discusses the need between areas to be restored and existing habitat areas needed for the full life cycle of

species targeted to benefit from the restoration project. We agree with a full life cycle analysis but these projects and the areas they cover only touch a small portion of the salmon life cycle.

Page 122 line 17 lists hatchery impacts as a current stressor that can be controlled.

Comment- Hatchery impacts are sometimes cited as a problem that impedes salmon recovery. In other forums, hatcheries are proposed as the solution to salmon recovery. GGSA rejects both of these scenarios. The five salmon hatcheries in the Central Valley were all constructed to mitigate for dam constructions. For the most part they have been successful in accomplishing that objective. In recent years science has determined that hatchery salmon are not equal to naturally spawning salmon. They are inherently weaker and less able to survive conditions in the wild. In addition, hatchery fish tend to dilute the diversification in genetic makeup which allows different diversified salmon strains to survive and adapt to different habitat conditions. The result of these conclusions are management policies to adopt practices which avoid the interbreeding of hatchery fish and natural spawning fish. This can be accomplished by reserving certain spawning areas for naturally spawning fish and blocking hatchery fish from entering those areas. Some of this can be accomplished by activating blocking weirs based on run timing and in other instances it is necessary to physically mark the hatchery fish so they can be blocked by inspection at a separation weir.

Moreover, the adoption of genetic protocols within hatcheries – such as were adopted by the Livingston Stone facility as a conservation hatchery for winter-run – can help to assure strong populations of hatchery fish with little difference between them and wild spawning populations.

The Central Valley fish agencies are currently taking steps to implement the separation of hatchery fish from natural spawners. GGSA supports this activity as the right way to solve the problems and to rebuild the wild stocks. GGSA strongly opposes any curtailment of hatchery production. The recreational and commercial fisheries largely depend on the hatchery fish for their harvest. There are currently not enough natural spawning areas left in the Central Valley to support a fishing industry. GGSA recommends the Delta Stewardship Council adopt a hatchery policy along these lines. GGSA advocates one change to the agency separation steps. Most of the steps currently underway are designed to block both the fall run hatchery fish and the naturally spawning fall run fish from certain areas. These steps are being taken to reserve special spawning areas for the ESA listed runs. Battle Creek and parts of Clear Creek are good examples. Natural spawning fall run fish are being blocked from those prime areas. GGSA advocates a “no net loss” policy for natural spawning fall run fish. If areas are taken away for ESA fish, other areas must be developed and enhanced for the wild fall run fish.

Page 127 Performance Measures. Line 40 says “Trends in occurrence and performance of native species in protected and restored habitats and corridors will be upward over the next decade.”

Comment – GGSA sees no basis for making this statement and no elements in Draft Five that support this conclusion for salmon. We believe the statement is false and misleading. The same statement is made on lines 1 and 2 on page 128. We urge that future drafts include enough of the specific needed salmon actions that this statement can accurately be made.

Page 128 line 4. The Plan lists progress toward the state and federal “doubling goal” for wild Central Valley Salmon as one of the performance measures for measuring plan success.

Comment- GGSA strongly supports the doubling requirement. However, at the present time we see no steps in Draft Five or any other state or federal plan that have any probability of achieving the doubling goal. If the natural spawning salmon populations are to be doubled, the areas where the wild fish spawn and rear must be restored. The three primary areas in the Valley where wild salmon traditionally spawned after the construction of the dams were the Upper Sacramento River, The American River and The Feather River. The spawning in all of these zones has mostly been destroyed by the state and federal project pumping practices. Reservoir release practices are the main cause. High flows at the wrong time, low flows at the wrong time, rapid changes between high and low flows, and lethal temperatures caused by lack of cold water storage are the main problems. The attached American River temperature profile is a good example of the problems that must be fixed if the wild salmon populations are to be doubled.

GGSA Suggested Project Additions to Draft Five

GGSA is currently working on a schedule of specific projects and priorities that will rebuild the salmon runs when combined with the flows in the salmon BiOp. We are including two of these projects here for consideration by the Council. Others will be available in the future.

Proposed Project 1 – Adult Migration to the Mokelumne River

In recent years there have been problems in adult fall run salmon finding their way back to the Mokelumne River. The main stem Mokelumne branches to the East just South of the Delta cross channel gates. With heavy water exports in the fall of the year typically there will be 3,000 CFS of Sacramento River water coming through the cross channel

gates going to the pumps. At the same time, the Mokelumne main stem will be flowing at only about 80 CFS. Most of the returning adults will miss picking up the smell of the Mokelumne and will swim through the heavy flow at the gates. The result is that adults do not reach the Mokelumne spawning areas and production from the River and Hatchery is dramatically curtailed. The hatchery is capable of producing 6 million smolts and the river can support 2,000 to 4,000 wild spawners. In 2008 only 49 female adults reached the hatchery. 2,000 are needed for full production.

The solution to this problem is to close the Cross channel gates for 14 days in October at the peak of the adult migration. The adults will then follow their natural path and turn into the Mokelumne. This adaptive management practice costs almost nothing and makes a huge improvement in the Central Valley salmon production. The Delta Plan should support this project as one of the early steps that can be accomplished for rebuilding the runs.

Proposed Project 2 – Trucking of Hatchery Smolts to the Ocean

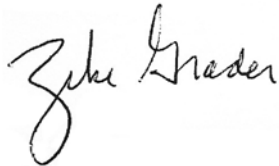
At the present time and for the foreseeable future there are heavy losses of the salmon smolts attempting to migrate down the Sacramento River and through the Delta. NMFS studies show that only 20% of the smolts survive the river trip to reach the Delta and on average only 50% of the smolts reaching the Delta survive to reach the ocean. The combination of these losses results in only about 10% of the smolts reaching the ocean. With an average ocean survival of about 2%, the runs are not sustainable with this pattern. They will continue to decline towards extinction.

These losses can be avoided by trucking hatchery smolts around the Delta and placing them in adaptation pens below the Delta. Since 2008, 13 to 15 million hatchery smolts have been trucked annually using this method. The coded wire tag studies show a dramatic improvement in ocean populations with trucked fish. The figures show ocean populations of trucked smolts are a minimum of 6 to 7 times higher than smolts that are released at the hatcheries.

Trucking is now proven as a method of increasing salmon survival. However, increased adult straying can result and the trucking system is not currently adaptable to wild spawning fish. A comprehensive science trucking study is needed to further improve the results and to examine techniques where trucking can be applied to wild spawning fish. Trapping and barging is done in some Northwest watersheds and its application to the Central Valley salmon needs to be evaluated. The Golden Gate Salmon Association has proposed a \$2.5 million study of trucking or other movement systems around the Delta. The Delta Plan should endorse these kinds of innovative projects that can solve major problems for the salmon and other water users.

Thank you for allowing us to comment.

Sincerely,



Zeke Grader
Vice President



Roger Thomas
Chairman



Dick Pool
Secretary



Victor Gonella
President

Attachments:

The Rise and Fall of the Central Valley Chinook Salmon Returns
Typical Fall American River Temperatures

The Rise and Fall Of the Central Valley Chinook Salmon Returns

Total of all Central Valley Runs - DFG Data

700

600

500

400

300

200

(Thousands)

100

(000)

1990

91

92

93

94

95

96

97

98

99

2000

01

02

03

04

05

06

07

WFF 02/28/2009

1990 - The Winter Run Salmon is Listed under The Endangered Species Act . The National Marine Fishery Service begins the Recovery Process requiring \$1 billion in river improvements. All salmon runs benefit and the restoration process accelerates.

1993 - The Red Bluff Dam gates are opened allowing two way migration.

1996 - The Shasta Dam Temperature Curtain is completed allowing cold water flows

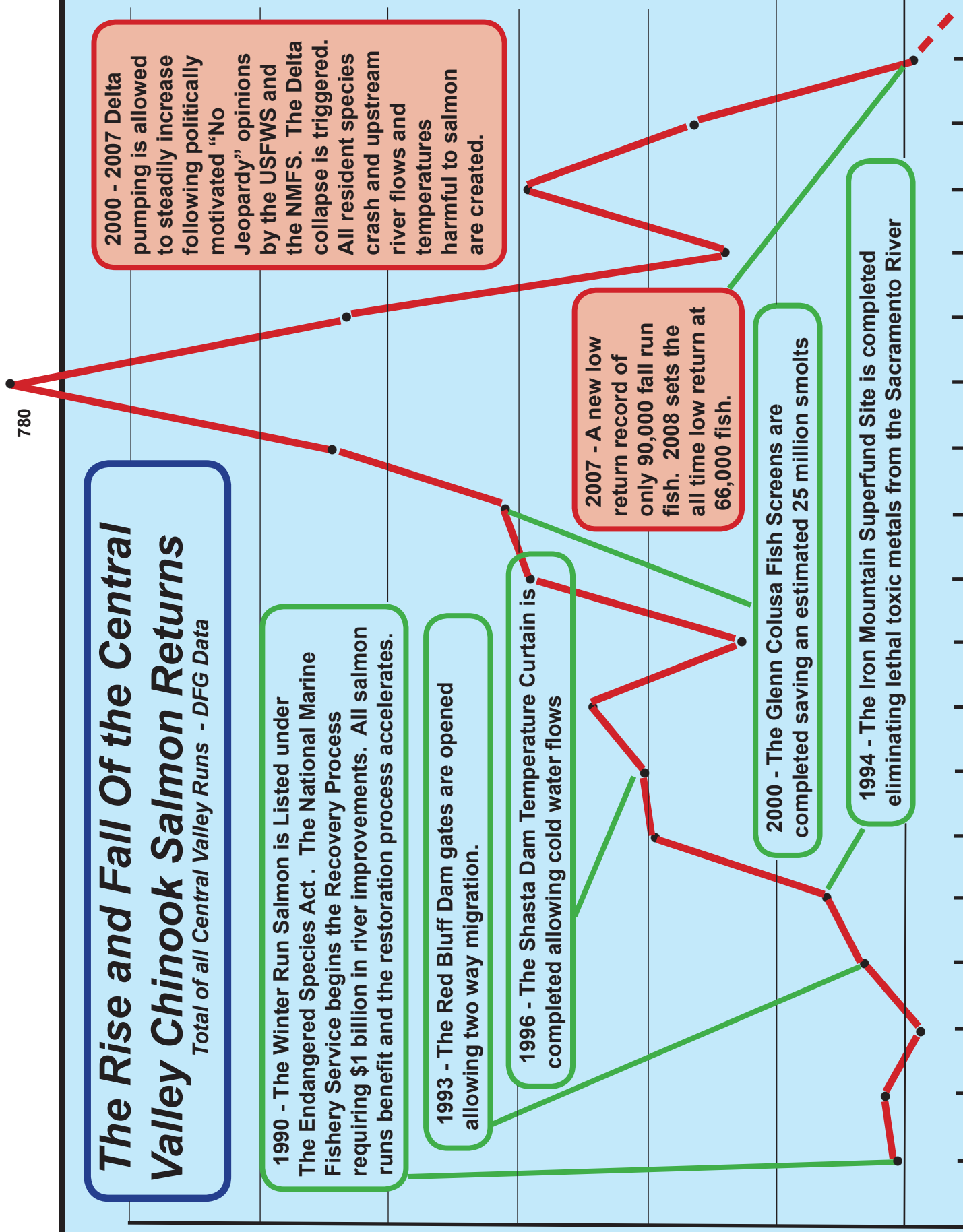
2000 - The Glenn Colusa Fish Screens are completed saving an estimated 25 million smolts

1994 - The Iron Mountain Superfund Site is completed eliminating lethal toxic metals from the Sacramento River

2000 - 2007 Delta pumping is allowed to steadily increase following politically motivated "No Jeopardy" opinions by the USFWS and the NMFS. The Delta collapse is triggered. All resident species crash and upstream river flows and temperatures harmful to salmon are created.

2007 - A new low return record of only 90,000 fall run fish. 2008 sets the all time low return at 66,000 fish.

780



Typical Fall American River Temperatures

The American River is a death trap for fall run salmon. The state and federal pumps draw all the cold water from behind Folsom Dam during the summer. The adult salmon start arriving in July and are left with lethal habitat for spawning. This problem must be solved if the salmon are to recover.

Recent pre-spawn adult mortalities:	
2001	87,600
2002	35,400
2003	58,600

Lethal Temperatures

Adult salmon cannot survive in water over 60 degrees

Salmon eggs cannot survive in water over 58 degrees

Okay Temperatures

September

October

November

1

8

15

22

29

6

13

20

27

3

10

17

24